

Exhibit 8.1: Discovery Analysis -- Closure Options				
Table 8.1.2: Explanation of CCR Remediation and Closure Options				
Option 1: Hybrid Closure	Option 2: Closure-In-Place	Option 3A: Closure-By-Removal #1 (Existing On-Site Landfill)	Option 3B: Closure-By-Removal #2 (Existing & New On-Site Landfills)	Option 4: Closure-By-Removal #3 (Off-Site Third Party Landfill)
Dewater ash basin.	Dewater ash basin.	Dewater ash basin.	Dewater ash basin.	Dewater ash basin.
Provide dust and erosion control.	Reroute storm water sluice lines from existing coal plant and decommission CCR slurry lines.	Provide dust and erosion control.	Provide dust and erosion control.	Excavate and removal of ash to off-site landfill.
Demo and grout in place piezometers and water wells within the basin boundary limits.	Leave the CCR material within the Ash Basin(s).	Demo and grout in place piezometers and water wells within the basin boundary limits.	Demo and grout in place piezometers and water wells within the basin boundary limits.	Breach dam(s) between the basins.
Demo pump house/weir/wooden bridge	Grade and level ash remaining in Ash Basin(s).	Excavate top soil and substrate to create void for on-site landfill.	Excavate top soil and substrate to create void for on-site landfill.	Design and construct haul road(s).
Demo forebay dam and concrete bridge	Cap with an infiltration barrier cap system meeting the requirements of the Federal CCR Rule and CAMA.	Expand leachlate collection system.	Haul in additional soil and clay to line and cover the landfill.	Collect and dispose of leachate.
Cut dam down and push into the basin as fill material	Reroute storm water sluice lines from existing coal plant.	Expand bottom and sidewall liner.	Install leachate collection system.	Supply and install truck scales.
Excavate and remove riprap and store for later use	Grade area once ash removal is completed.	Remove all CCR from CCR basin(s).	Install bottom and sidewall liner.	Supply and install truck wash system.
Excavate and grade basin for drainage.	Provide and install erosion control measures to prevent run-run and run-off of stormwater.	Allow CCR to drain before placing in new on-site landfill.	Remove all CCR from CCR basin(s).	Remove ash from one basin and stockpile into other basin(s).
Haul in borrow material for soil cover and topsoil from offsite source.	Decommission remaining dam(s).	Install engineered cover system including geosynthetic liner, geocomposite drainage layer, 2 feet of soil cover which includes 6 inches of topsoil.	Allow CCR to drain before placing in new on-site landfill.	Repair and resurface haul road (state roads affected by ash hauling outside of plant property).

Exhibit 8.1.2: Discovery Analysis -- Recommended Disallowances**Table 5.2: Summary of Closure Options and Recommended Disallowances**

Plant	Claimed By DEC per Response 9-01	Closure Option Compliance with Federal CCR Rules	Recommended Disallowance
Allen	\$ 53,059,021	Federal CCR Compliant	\$ -
Belews Creek	\$ 50,535,423	Federal CCR Compliant	\$ -
Buck	\$ 80,765,334	Beneficiation -- CAMA only	\$ 36,544,788
Cliffside	\$ 66,076,839	Federal CCR Compliant	\$ -
Dan River	\$ 167,426,449	CAMA High Priority - Accelerated Schedule	\$ 116,669,019
Marshall	\$ 43,212,613	Federal CCR Compliant	\$ -
Riverbend	\$ 316,680,665	No Federal CCR Requirements	\$ 316,680,665
WS Lee (SC)	\$ 98,449,950	Federal CCR Compliant & SCDHEC Requirements	\$ -
TOTAL	\$ 876,206,294		\$ 469,894,472

Exhibit 8.1: Discovery Analysis -- Closure Options

Table 8.1.2: Explanation of CCR Remediation and Closure Options

Option 1: Hybrid Closure	Option 2: Closure-In-Place	Option 3A: Closure-By-Removal #1 (Existing On-Site Landfill)	Option 3B: Closure-By-Removal #2 (Existing & New On-Site Landfills)	Option 4: Closure-By-Removal #3 (Off-Site Third Party Landfill)
Install engineered cover system including geosynthetic liner, geocomposite drainage layer, 2 feet of soil cover which includes 6 inches of topsoil.		Reroute storm water sluice lines from existing coal plant.	Install engineered cover system including geosynthetic liner, geocomposite drainage layer, 2 feet of soil cover which includes 6 inches of topsoil.	Excavate and remove to offsite landfill non-ash items excavated such as stumps, concrete, pipe, large boulders, etc ...
Hydro seed basin to establish surface stabilization.		Grade area once ash removal is completed.	Reroute storm water sluice lines from existing coal plant.	Dewater of basin(s).
		Provide and install erosion control measures.	Grade area once ash removal is completed.	Demo haul road inside the plant property including ash beneath road bed plus an additional foot of soil.
		Decommission remaining dam(s).	Provide and install erosion control measures.	Reroute storm water sluice lines from existing coal plant.
			Decommission remaining dam(s).	Grade area once ash removal is completed.
				Provide and install erosion control measures.
				Decommission of remaining dam(s).

Plant	SOC (Y/N)	SOC Date	SOC Number	# Seeps Included	Monitoring/Reporting Required per SOC	Parameters	Beneficiation (Y/N)	Closure Method	Closure Complete?	Closure Date
Allen	Y	4/25/2018	EMC SOC WQ.S17-009	6 non-constructed seeps	<ul style="list-style-type: none"> - Quarterly seep monitoring. Report findings of exceedances within 60 days to DWR. - Quarterly decanting status reports. - Annual surveys to identify new seeps and examine existing seeps. Report on any new seeps, changes to existing ones, or dispositioned seeps. - Final Seep Report 90 days after completion of decanting. - Seep Characterization Report 60 days after Final Seep Report. - Proposed amendment to Closure Plan 60 days after Seep Characterization Report. 	<ul style="list-style-type: none"> - Annual: TSS, oil and grease - Quarterly: pH, fluoride, mercury, barium, zinc, arsenic, boron, cadmium, chromium, copper, thallium, lead, nickel, selenium, nitrate/nitrite, bromides, sulfates, chlorides, TDS, hardness, temperature, conductivity 	N	Preferred option is cap in place or hybrid cap. Hybrid would involve reducing the footprint first before capping.	N	?
Belews Creek	Y	7/17/2018	EMC SOC WQ.S18-004	1 constructed seep, 16 non-constructed seeps, 4 instream monitoring locations	<ul style="list-style-type: none"> - Quarterly seep monitoring. Report findings of exceedances within 60 days to DWR. - Quarterly decanting status reports. - Annual surveys to identify new seeps and examine existing seeps. Report on any new seeps, changes to existing ones, or dispositioned seeps. - Final Seep Report 90 days after completion of decanting. - Seep Characterization Report 60 days after Final Seep Report. - Proposed amendment to Closure Plan 60 days after Seep Characterization Report. 	<ul style="list-style-type: none"> - Annual: TSS, oil and grease - Quarterly: pH, fluoride, mercury, barium, zinc, arsenic, boron, cadmium, chromium, copper, thallium, lead, nickel, selenium, nitrate/nitrite, bromides, sulfates, chlorides, TDS, hardness, temperature, conductivity 	N	Hybrid closure. Will decrease overall footprint of ash before capping.	N	?
Buck	Y	7/17/2018	EMC SOC WQ.S18-004	2 constructed seeps, 15 non-constructed seeps, 4 instream monitoring locations	<ul style="list-style-type: none"> - Quarterly seep monitoring. Report findings of exceedances within 60 days to DWR. - Quarterly decanting status reports. - Annual surveys to identify new seeps and examine existing seeps. Report on any new seeps, changes to existing ones, or dispositioned seeps. - Final Seep Report 90 days after completion of decanting. - Seep Characterization Report 60 days after Final Seep Report. - Proposed amendment to Closure Plan 60 days after Seep Characterization Report. 	<ul style="list-style-type: none"> - Annual: TSS, oil and grease - Quarterly: pH, fluoride, mercury, barium, zinc, arsenic, boron, cadmium, chromium, copper, thallium, lead, nickel, selenium, nitrate/nitrite, bromides, sulfates, chlorides, TDS, hardness, temperature, conductivity 	Y	Onsite beneficiation unit, will involve at least 300,000 tons per year.	N	Per CAMA, must be complete by 2029.



State releases deadlines for coal ash pond closures, will request changes to coal ash law

RALEIGH

May 18, 2016

The state environmental department today released proposed classifications for all coal ash ponds in North Carolina, while at the same time asking the General Assembly to allow the reconsideration of those classifications 18 months from now. The classifications are based on the current risk of each pond's impact on public health and the environment. However, work that is already either planned or underway could significantly change the risk posed by the ponds.

"The deadlines in the coal ash law are too compressed to allow adequate repairs to be completed," said Donald R. van der Vaart, secretary of the state environmental department. "It also does not allow for revisions to the classifications based on new information about a pond's risk to public health and the environment."

The proposed classifications include the eight mandated as high priority under the law, and 25 classified by today's action as intermediate. High risk ponds must be dug up and closed by 2019 and intermediate ponds must be dug up and closed by 2024. The main risk factors driving today's classifications were dam deficiencies that are currently being repaired, and potential impacts to nearby groundwater. Recent discussions indicate that providing nearby residents permanent alternative water will relieve any future concerns.

"The focus of the coal ash law was to safely close all coal ash ponds in North Carolina," continued Secretary van der Vaart. "The intent was not to set pond closure deadlines based on incomplete information. Making decisions based on incomplete information could lead to the expenditure of billions of dollars when spending millions now would provide equal or better protection. The understanding we have today reflects countless hours of scientific and technical work by both state engineers and Duke Energy as well as thousands of comments by the public."

Although no dams present an imminent risk to life or property, a number of ponds were rated intermediate because of unfinished repairs. State regulators will use their existing legal authority to ensure those repairs are completed by the end of this year.

The residents' well water meets federal requirements for safe drinking water. However, Duke Energy has submitted a study that evaluates the feasibility of supplying permanent alternative water to nearby residents. The state environmental department will recommend to the General Assembly that the classifications be re-evaluated after the dam safety repairs are made and the utility provides these permanent alternative water sources to nearby well owners.

These proposed classifications will become final 60 days from today.

For a map of the proposed classifications for each coal ash impoundment, click [here](http://portal.ncdenr.org/c/document_library/get_file?p_1_id=1169848&folderId=26884096&name=DLFE-125497.pdf) (http://portal.ncdenr.org/c/document_library/get_file?p_1_id=1169848&folderId=26884096&name=DLFE-125497.pdf)

A table that shows the risk factors that determined each pond's classification can be found [here](http://portal.ncdenr.org/c/document_library/get_file?p_1_id=1169848&folderId=26884096&name=DLFE-125496.pdf) (http://portal.ncdenr.org/c/document_library/get_file?p_1_id=1169848&folderId=26884096&name=DLFE-125496.pdf)

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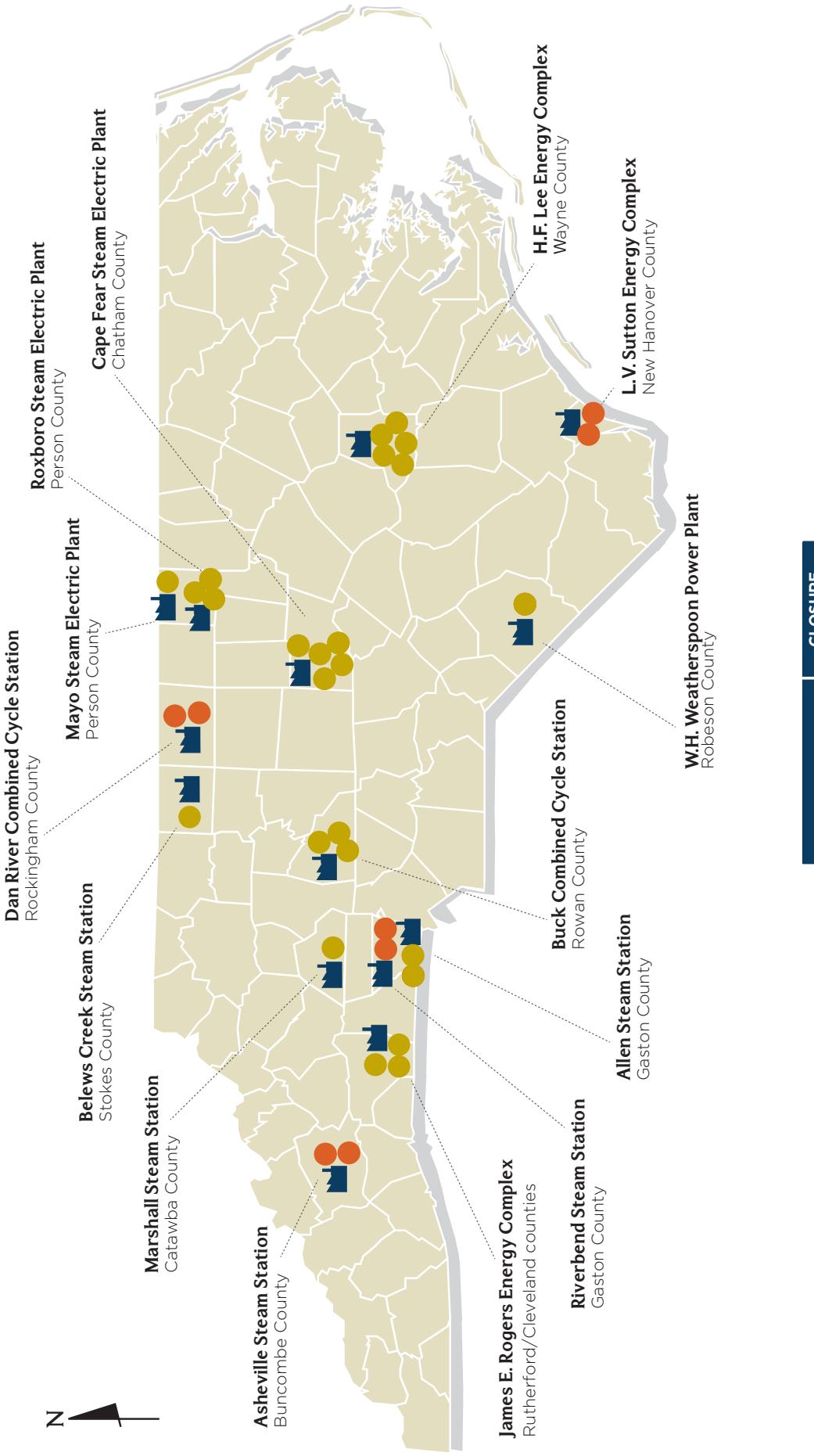
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Proposed Classifications

N



Proposed Classifications Chart

In accordance with the coal ash law, the state environmental department has proposed the risk classification for all coal ash ponds in North Carolina as intermediate based on current conditions and available data, except for those already designated high priority by the coal ash law. If all necessary modifications and dam repairs included in the Notice of Deficiencies had been made to DEQ's satisfaction, and if nearby wells were determined to not be affected by the coal ash ponds to DEQ's satisfaction, or permanent alternate water was made available to nearby residents, then these basins would have been classified as low. The coal ash law does not grant DEQ the authority to change a pond's classification based on new information after the final proposed classifications are released. DEQ will recommend that the law be changed to reflect dam safety repairs or the removal of any threat to drinking water. DEQ would consider these subsequent actions or impose such conditions and reclassify the basins if the state law granted this authority.

Facility	Basin	Dam Safety State ID	Original Draft Proposed Risk Classification	NEW PROPOSED RANKINGS**		PROPOSED RISK CLASSIFICATION
				Surface Water Rankings	Dam Safety Ranking	
Allen Steam Station	Active Ash Basin	GASTO-061	Low to Intermediate	Low	Intermediate	Intermediate
Allen Steam Station	Retired Ash Basin	GASTO-016	Low to Intermediate	Low	Intermediate	Intermediate
Asheville Steam Station	1964 Ash Basin	BUNCO-089				HIGH*
Asheville Steam Station	1982 Ash Basin	BUNCO-097				HIGH*
Belews Creek Steam Station	Active Ash Basin	STOKE-116	Low to Intermediate	Intermediate	Intermediate	Intermediate
Buck Combined Cycle Station	Ash Basin 1	ROWAN-068 & ROWAN-069	Low to Intermediate	Low	Low	Intermediate
Buck Combined Cycle Station	Ash Basin 2	ROWAN-070 & ROWAN-071	Low to Intermediate	Low	Low	Intermediate
Buck Combined Cycle Station	Ash Basin 3	ROWAN-047	Low to Intermediate	Low	Intermediate	Intermediate



Proposed Classifications Chart

Facility	Basin	Dam Safety State ID	Original Draft Proposed Risk Classification	NEW PROPOSED RANKINGS**		Groundwater Ranking	PROPOSED RISK CLASSIFICATION
				Surface Water Rankings	Dam Safety Ranking		
Cape Fear Steam Electric Plant	1956 Ash Pond	CHATH-075	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Cape Fear Steam Electric Plant	1963 Ash Pond	CHATH-076	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Cape Fear Steam Electric Plant	1970 Ash Pond	CHATH-077	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Cape Fear Steam Electric Plant	1978 Ash Pond	CHATH-078	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Cape Fear Steam Electric Plant	1985 Ash Pond	CHATH-079	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Dan River Combined Cycle Station	Primary Ash Basin	ROCKI-237					HIGH*
Dan River Combined Cycle Station	Secondary Ash Basin	ROCKI-238					HIGH*
H. F. Lee Energy Complex	Active Ash Pond	WAYNE-022	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
H. F. Lee Energy Complex	Polishing Pond	WAYNE-034	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
H. F. Lee Energy Complex	Ash Pond #1	WAYNE-031	Intermediate	Low	Intermediate	Intermediate	INTERMEDIATE



5/18/2016
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Proposed Classifications Chart

Facility	Basin	Dam Safety State ID	Original Draft Proposed Risk Classification	NEW PROPOSED RANKINGS**			PROPOSED RISK CLASSIFICATION
				Surface Water Rankings	Dam Safety Ranking	Groundwater Ranking	
H. F. Lee Energy Complex	Ash Pond #2	WAYNE-032	Intermediate	Intermediate	Low	Intermediate	INTERMEDIATE
H. F. Lee Energy Complex	Ash Pond #3	WAYNE-033	Intermediate	Intermediate	Low	Intermediate	INTERMEDIATE
James E. Rogers Energy Complex (formerly Cliffside Steam Station)	Active Ash Basin	CLEVE-049 & CLEVE-050	Low to Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
James E. Rogers Energy Complex (formerly Cliffside Steam Station)	Retired Unit 1-4 Basin	CLEVE-047	Low	Low	Low	Intermediate	INTERMEDIATE
James E. Rogers Energy Complex (formerly Cliffside Steam Station)	Retired Unit 5 Basin	RUTHE-070 & RUTHE-072	Low	Low	Intermediate	Intermediate	INTERMEDIATE
Marshall Steam Station	Ash Basin	CATAW-054	Low to Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Mayo Steam Electric Plant	Ash Pond	PERSO-035	Low	Intermediate	Intermediate	Intermediate	INTERMEDIATE
Riverbend Steam Station	Primary Ash Basin	GASTO-097					HIGH*
Riverbend Steam Station	Secondary Ash Basin	GASTO-098					HIGH*

Proposed Classifications Chart

Facility	Basin	Dam Safety State ID	Original Draft Proposed Risk Classification	New Proposed Rankings**			Proposed Risk Classification
				Surface Water Rankings	Dam Safety Ranking	Groundwater Ranking	
Roxboro Steam Electric Plant	Unnamed Eastern Extension Impoundment	NA	Intermediate	Low	N/A	Intermediate	INTERMEDIATE
Roxboro Steam Electric Plant	East Ash Pond	PERSO-033	Low to Intermediate	Low	Intermediate	Intermediate	INTERMEDIATE
Roxboro Steam Electric Plant	West Ash Pond	PERSO-038 & PERSO-039	Low	Low	Intermediate	Intermediate	INTERMEDIATE
L. V. Sutton Energy Complex	1971 Ash Pond	NEWHA-005					HIGH*
L. V. Sutton Energy Complex	1984 Ash Pond	NEWHA-004					HIGH*
W. H. Weatherspoon Power Plant	Ash Pond	ROBES-009	Intermediate	Intermediate	Intermediate	Intermediate	INTERMEDIATE

*Legislated risk classifications: Deemed high priority for closure by part II, section 3(b) of the Coal Ash Management Act of 2014.

**Classifications are based on available data received as of May 1, 2016.





Dan Wittliff
Exhibit 9.1
Virginia Dominion Excavation

BRIEF

Virginia lawmakers strike deal on bill directing Dominion to excavate coal ash

By Catherine Morehouse

Published Jan. 25, 2019

Dive Brief:

- Virginia legislators reached an agreement to move forward on a bipartisan bill Thursday that would require Dominion Energy to excavate all the coal ash at their Virginia coal plants, over 27 million cubic yards.
- The agreement drew support from both Republican and Democratic members of the House and Senate, as well as Gov. Ralph Northam, D, and will also require that at least a quarter of the waste be recycled. The remaining ash would have to be moved into fully lined basins to prevent further groundwater contamination.
- Dominion Energy had originally indicated its preference for a "cap in place" closure, the favored method of most utilities, but an analysis released by Dominion in November found that it would be more cost effective to recycle a portion of the ash and sell it to interested bidders than initially reported.

Dive Insight:

The agreement among Virginia lawmakers on Thursday marks a rare legislative intervention against utility plans to store coal ash at their plant sites as companies continue to clash with environmental groups over the most effective methods to handle the waste.

There was "very much a battle over whether this bill would get passed in any substantial form," Nate Benforado, staff attorney at the Southern Environmental Law Center who worked closely on the legislation, told Utility Dive.

"It's a huge development that really shows how far we've come over the past few years" and represents an "understanding of environmental risks of existing contamination and understanding there's a cost-effective solution," he said.

While most utilities argue that leaving the waste in place is effective and more economic, environmental groups have long said that method does not adequately protect groundwater.

After a report from Earthjustice in December found that 67 coal plants across 22 states were violating federal pollution standards at their coal ash sites, several environmental groups filed a petition for review against the Environmental Protection Agency, concerned that utilities weren't being forced to excavate those sites quickly enough.

Five plants on that list were owned by Dominion Energy in Virginia, and groundwater filings showed all of those plant sites would require cleanup after reporting unsafe levels of metal contaminants including cobalt, lithium and arsenic.

Four coal ash ponds near the Chesapeake Bay Watershed in the state have been subject to legislation over the past two years, which prevented Dominion from using the cap in place closure method until a more holistic assessment was made. The economics of recycling a portion of the waste and the environmental implications for excavating all Virginia pits entirely led to the "very unique" bipartisan agreement, said Benforado.

Recycling the waste has proven to be effective in other states across the Southeast, many of which have sites near waterways that are vulnerable to flooding, especially as storms continue to intensify from warming waters. Duke Energy recycled 79% of the ash it produced in 2018, and 68% in its North Carolina territory,

where record-breaking rains from Hurricane Florence triggered a coal ash spill in September that released more than 2,000 cubic yards of the waste.

Recycling "is a very feasible cost-effective approach that's working in other states like North Carolina and South Carolina and should be working in Virginia too. And I think the sort of culmination of having a commercially successful closure method that permanently solves the environmental problem ... I think that's what led to where we are now," said Benforado.

Dominion did not attend an event with state officials announcing the bill agreement on Thursday. But the utility "supports the comprehensive agreement reached by the Governor, legislative leaders, and members of the General Assembly that accomplishes clean closure, minimizes truck traffic, and prudently manages customer costs for the closing of ash ponds at our power stations," it said in a statement emailed to Utility Dive.

Exhibit 8.5: Changes in Risk Classifications**Table 3.1: DEC Changes in Risk Classifications and Drinking Water Supply Spends**

Plant	Basin	<u>Risk Classification May 18, 2016</u>	<u>Risk Classification Nov 14, 2018</u>	CAMA Water Supply Costs (source: discovery response 9-06)
Allen	Active Ash Basin	Intermediate	Low	
	Retired Ash Basin	Intermediate	Low	\$12,966,496
Belews Creek	Active Ash Basin	Intermediate	Low	
	Ash Basin 1	Intermediate	Low	\$690,069
Buck	Ash Basin 2	Intermediate	Low	
	Ash Basin 3	Intermediate	Low	\$5,291,799
Cliffsides	Active Ash Basin	Intermediate	Low	
	Retired Unit 1-4 Basin	Intermediate	Low	
Dan River	Retired Unit 5 Basin	Intermediate	Low	
	Primary Ash Basin	High	no change	\$1,858,801
Marshall	Secondary Ash Basin	High	no change	\$24,378
	Ash Basin	Intermediate	Low	\$1,955,527
Riverbend	Primary Ash Basin	High	no change	\$7,289
	Secondary Ash Basin	High	no change	
			TOTAL	\$22,794,359

Exhibit 8.4: Water Supply Spends to Reduce Risk Classification

Plant	Basin	<u>Risk Classification May 18, 2016</u>	<u>Risk Classification Nov 14, 2018</u>	CAMA Water Supply Costs (source: discovery response 9-06)
Allen	Active Ash Basin	Intermediate	Low	\$12,966,496
	Retired Ash Basin	Intermediate	Low	
Belews Creek	Active Ash Basin	Intermediate	Low	\$690,069
	Ash Basin 1	Intermediate	Low	
Buck	Ash Basin 2	Intermediate	Low	\$5,291,799
	Ash Basin 3	Intermediate	Low	
CliffsidE	Active Ash Basin	Intermediate	Low	
	Retired Unit 1-4 Basin	Intermediate	Low	\$1,858,801
Dan River	Retired Unit 5 Basin	Intermediate	Low	
	Primary Ash Basin	High	no change	\$24,378
Marshall	Secondary Ash Basin	High	no change	
	Ash Basin	Intermediate	Low	\$1,955,527
Riverbend	Primary Ash Basin	High	no change	
	Secondary Ash Basin	High	no change	\$7,289

Plant	SOC (Y/N)	SOC Date	SOC Number	# Seeps Included	Monitoring/Reporting Required per SOC	Parameters	Beneficiation (Y/N)	Closure Method	Closure Complete?	Closure Date
Cliffs	Y	4/25/2018	EMC SOC WQ S17-009	35 non-constructed seeps	<ul style="list-style-type: none"> -Quarterly seep monitoring. Report findings of exceedances within 60 days to DWR. -Quarterly decanting status reports. -Annual surveys to identify new seeps and examine existing seeps. Report on any new seeps, changes to existing ones, or dispositioned seeps. -Final Seep Report 90 days after completion of decanting. -Seep Characterization Report 60 days after Final Seep Report. -Proposed amendment to Closure Plan 60 days after Seep Characterization Report. 	<ul style="list-style-type: none"> -Annual: TSS, oil and grease -Quarterly: pH, fluoride, mercury, barium, zinc, arsenic, boron, cadmium, chromium, copper, thallium, lead, nickel, selenium, nitrate/nitrite, bromides, sulfates, chlorides, TDS, hardness, temperature, conductivity 	N	Cap in place.	N	CAMA low risk classification, deadline for cap in place is 2019.
Dan River	N	N/A	N/A	N/A	N/A	N/A	N	Excavation to onsite and offsite landfills.	N	?
Marshall	Y	4/25/2018	EMC SOC WQ S17-009	4 non-constructed seeps	<ul style="list-style-type: none"> -Quarterly seep monitoring. Report findings of exceedances within 60 days to DWR. -Quarterly decanting status reports. -Annual surveys to identify new seeps and examine existing seeps. Report on any new seeps, changes to existing ones, or dispositioned seeps. -Final Seep Report 90 days after completion of decanting. -Seep Characterization Report 60 days after Final Seep Report. -Proposed amendment to Closure Plan 60 days after Seep Characterization Report. 	<ul style="list-style-type: none"> -Annual: TSS, oil and grease -Quarterly: pH, fluoride, mercury, barium, zinc, arsenic, boron, cadmium, chromium, copper, thallium, lead, nickel, selenium, nitrate/nitrite, bromides, sulfates, chlorides, TDS, hardness, temperature, conductivity 	N	Cap in place.	N	Excavation offsite to Charah mine.
Riverbend	Y	11/10/2016	EMC SOC WQ S16-005	Outfalls 101-112	<ul style="list-style-type: none"> -Quarterly progress reports summarizing closure of impoundments. -Quarterly discharge monitoring reports. -Monthly sampling from effective date of NPDES Permit NC0004961 (March 1, 2011). After one year from that date the monitoring was reduced to quarterly. 	<ul style="list-style-type: none"> Flow, MGD, pH, fluoride, mercury, barium, iron, manganese, zinc, arsenic, cadmium, chromium, copper, lead, nickel, selenium, nitrate, sulfates, chlorides, TDS, hardness, specific conductance 	N	Excavation offsite to Charah mine.	N	High-priority CAMA site, required completion 2019
WS Lee	N	N/A	N/A	N/A	N/A	N/A	N	Excavation to onsite and offsite landfills.	N	?

Exhibit 8.2: Estimating DEC Engineering and Planning Costs**Table 5.3: Estimating Engineering and Planning Costs for DEC Plants**

Plant	Cost Data From Company Response to SCORS 10-09	2015	2016	2017	2018 thru 9/30	10/1/18 to 12/31/18
Allen	Spend To Date	\$ 53,734,588.32	\$ 13,233,459.69	\$ 19,430,294.80	\$ 8,306,466.84	\$ 12,764,366.99
	Remaining Current Year Forecast	\$ 2,634,866.18	f \$ -	\$ -	\$ -	\$ -
	Total Pre-Construction (E&P)	\$ 56,369,454.49				\$ 2,634,866.18
	Total Project Costs	\$ 266,571,170.00				
Belews Creek	Percentage E&P of Total Project	21.15%				
	Spend To Date	\$ 51,150,499.01	\$ 9,861,194.00	\$ 26,479,748.00	\$ 9,534,640.33	\$ 5,274,916.68
	Remaining Current Year Forecast	\$ 6,833,966.79	f \$ -	\$ -	\$ -	\$ -
	Total Pre-Construction (E&P)	\$ 57,984,465.80				\$ 6,833,966.79
Cliffside	Total Project Costs	\$ 348,719,792.00				
	Percentage E&P of Total Project	16.63%				
	Spend To Date	\$ 71,472,788.25	\$ 25,869,494.00	\$ 21,351,036.49	\$ 13,088,716.81	\$ 11,163,540.95
	Remaining Current Year Forecast	\$ 744,816.44	f \$ -	\$ -	\$ -	\$ -
Marshall	Total Pre-Construction (E&P)	\$ 72,217,604.69				\$ 744,816.44
	Total Project Costs	\$ 264,216,906.00				
	Percentage E&P of Total Project	27.33%				
	Spend To Date	\$ 44,272,414.15	\$ 13,212,194.00	\$ 18,159,819.00	\$ 6,540,243.28	\$ 6,360,157.87
TOTAL FOUR	Remaining Current Year Forecast	\$ 9,634,230.32	f \$ -	\$ -	\$ -	\$ 9,634,230.32
	Total Pre-Construction (E&P)	\$ 53,906,644.47				
	Total Project Costs	\$ 352,048,416.00				
	Percentage E&P of Total Project	15.31%				
	Spend To Date	\$ 220,630,289.73	\$ 62,176,341.69	\$ 85,420,898.29	\$ 37,470,067.26	\$ 35,562,982.49
	Remaining Current Year Forecast	\$ 19,847,879.72				\$ 19,847,879.72
	Total Pre-Construction (E&P)	\$ 240,478,169.45				
	Total Project Costs	\$ 1,231,556,284.00				
Percentage E&P of Total Project		19.53%				



RELEASE: DEQ approves low-risk classification of seven coal ash impoundment facilities

Raleigh

Nov 14, 2018

The N.C. Department of Environmental Quality (DEQ) has determined that Duke Energy has met the low-risk classification criteria set forth in the Coal Ash Management Act (CAMA) for coal combustion residuals surface impoundments located at Duke Energy's Allen, Belews Creek, Buck, Rogers (formerly Cliffside), Marshall, Mayo, and Roxboro facilities.

Pursuant to CAMA, DEQ found that Duke Energy had established permanent water supplies and rectified dam safety deficiencies at coal ash impoundments located at the seven Duke Energy facilities. By law, a low-risk coal combustion residuals surface impoundment may, at the election of DEQ, be closed by excavation, cap in place, or a hybrid approach.

To that end, DEQ will hold public information meetings where the public can provide input on closure options. The public information meetings will be announced at a later date.

This press release is related to:

RELEASE: DEQ approves low-risk classification of seven coal ash impoundment facilities

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